101

Node A
epoch=0

102

Node B
epoch=0

103

Node C
epoch=0

104

Node D
epoch=0

105

Event 1
Node B unable to
communicate with others
Nodes A, C, and D notified
through heartbeat system

Nodes A, C and D execute LAPI_Purge_totask(B) which causes epoch_no++;

Node A
epoch=1

Node B
epoch=?

Node C
epoch=1
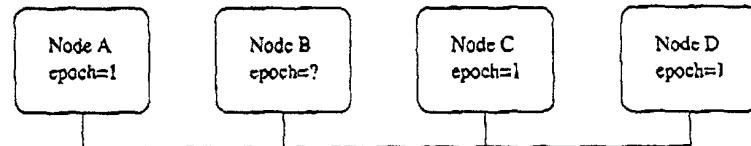
Node D
epoch=1

Event 2
Node D unable to communicate
with others. Nodes A and C
notified through heartbeat
system

Nodes A and C execute LAPI_Purge_totask(D) which causes epoch_no++

Node A
epoch=2

Node B
epoch=?

Node C
epoch=2
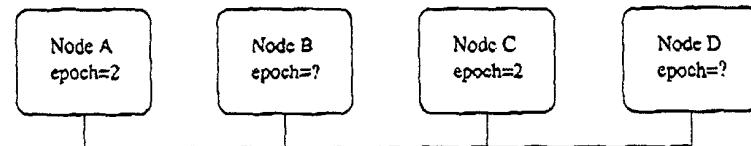
Node D
epoch=?

Event 3
Node D comes back online and
can now participate in the
computation/communication
notified through heartbeat system

Nodes A , C, and D execute LAPI_Resume_totask(D) which causes epoch_num++

Node A
epoch=3

Node B
epoch=?

Node C
epoch=3

Node D
epoch=3
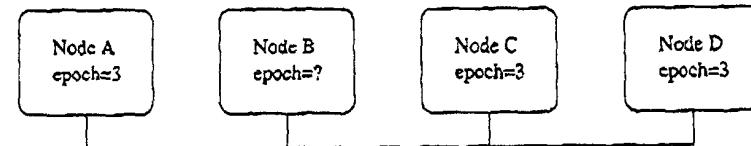
Event 4
Node B comes back online and
can now participate in the compu-
tation/communication notified
by the heartbeat system

Nodes A, B, C, and D execute LAPI_Resume_totask(B) which causes epoch_num++

Node A
epoch=4

Node B
epoch=4

Node C
epoch=4

Node D
epoch=4
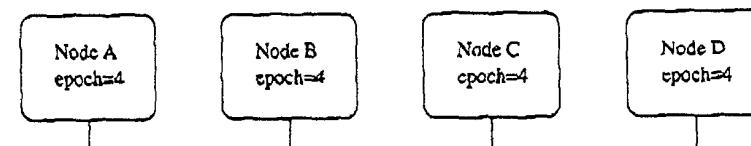
Example Scenario showing the recovery model